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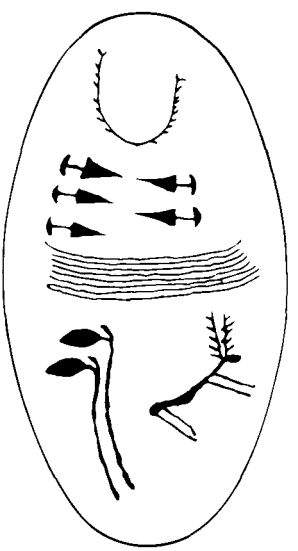

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CENTRO CAMUNO DI STUDI PREISTORICI
25044 CAPO DI PONTE (BRESCIA), ITALIA
Tel. 0364/42091 - Fax 0364/42572
E-mail: ccsp@globalnet.it

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BOVINE DEPICTIONS IN MALTESE PREHISTORIC ART

Charles SAVONA-VENTURA & Anton MIFSUD

In spite of the fact that archaeological evidence suggests that Neolithic man colonised the Maltese Islands about 7000 years ago, there is tangible evidence of the human presence on the Islands as early as the Late Pleistocene (Anati, 1988; Fedele, 1988; Mifsud & Mifsud, 1997). During this period, the cultural evolution of *Homo sapiens sapiens* was still at a stage of hunter-gatherers. *Homo sapiens sapiens* continued to develop culturally to reach the Neolithic stage, when man was able to make polished stone implements, produce pottery and farm the land. In addition, there is definite evidence that Early Neolithic (5000-4100 BC) man in Malta domesticated animals including sheep, goats, pigs and cattle. In the subsequent centuries (4100-2500 BC), this culture in the Maltese Islands was replaced by a more advanced Late Neolithic one which gave rise to the megalithic temples scattered over the Islands. Studies at various archaeological sites on the Maltese Islands have revealed evidence of the presence of a breed of cattle which appeared to be dominant on the Islands throughout the Prehistoric period. These archaeological cattle remains include a number of depictions of bulls and cows, besides a number of bone remains excavated from the various sites.

Emmanuel Anati has presented photographic documentation of cave-paintings from Ghar Hasan (Malta). The style and concepts of these paintings have been attributed to a hunter population datable to a period earlier than the Neolithic and probably datable to the Palaeolithic. These cave art representations include various animal figures, including what appears to be a half drawing of a horned bovine species. The relatively large horns were placed on the top of a massive head which was apparently followed by a shoulder hump. This bovine filled-in painting appears to have been superimposed on a previous painting of a proboscid (Anati, 1990, fig. 158; 1995). Also a panel discovered in Gallery C at Ghar Hasan has two light red infilled cave-paintings which may possibly represent depictions of bovids -one showing the whole animal, the other painting depicting a bovid head. Another possible pre-Neolithic depiction of a bovine is the bull representation measuring 1.15 by 0.98 metres described from the Hal Saflieni Hypogeum (Malta). The bovine picture was a crudely painted outline of a bull, made up of dark lines of black manganese dioxide pigment. The bovine was described in 1968 as having *"a hunch on its back, with short horns and tail, resembling those bulls found carved on the stone-blocks at Tarxien, and also is about the same size as the latter"*. In 1972, it was noted that the head and shoulders of the painting had not survived (Agius, 1968, pp. 5-7; Trump, 1972, p. 63). A photograph published in 1959 however suggested the bull to have relatively large horns (Agius, 1959, pp. 5-7). The painting was situated on the left wall at the entrance of the Holy of Holies (Agius, 1959, pp. 5-7; 1968, pp. 5-7; Trump, 1972, p. 63; McGregor Eadie, 1995, p. 104). It has been considered to represent the Pleistocene European bison-bull (Megarry, 1995, p. 261). This painting

was definitely ancient and apparently antedated the Late Neolithic red ochre decorations. This is suggested by the fact that the general ochre wash on the wall ceases exactly at the black line, as if intentionally to preserve the previously drawn picture (Trump, 1972). The Hypogeum complex was probably a natural cave system which was modified extensively by Late Neolithic man to be used for Death Cult practices. It is possible that during the enlargement of the caverns, Neolithic man came across the bull depiction painted by earlier man, preserving it since the bull was considered sacred. Paintings in black were dominant in the earlier forms of cave art (Clottes, 1996), and considering the simple, crude design of this Hypogeum bovine, together with its frozen aspect, the lack of perspective and infill, and the non-differentiation between foreground and background, its dating in the Upper Palaeolithic is therefore estimated to be very early on in the pre-Magdalenian period (Clottes, 1996; Delluc, 1991; Leroi-Gourhan, 1965, pp. 68, 147-148, 159). Fossil remains from the Late Pleistocene suggest that the Maltese fauna included a bovine species. Oxen remains have been excavated from undisturbed Pleistocene deposits at Ghar Dalam (Malta) in association with *cervus*, hippopotami and elephant remains in "red earth" deposits dated to c. 18,000 years ago (Caton Thompson, 1923; Baldacchino, 1937). Accepting that these cave art bovine pictures were painted by Palaeolithic Man, the depictions may be assumed to represent the prevalent Late Pleistocene bovine species. This animal would appear to have been a horned humped species.

Further depictions of bovine specimens have been associated with material datable to the Late Neolithic Period (3300-3000/2500 BC). These depictions includes a series of two bulls and a cow cut on relief on a stone block at Tarxien Temples. The cow has repeatedly been referred to be a sow, but its general outline is more in keeping with that of a cow and is very much different than the pig depicted on a relief found in the same temple. The bulls, one of which is damaged at the top end, are depicted as having a small head with slightly curved long horns, a shoulder hump and a high rump. The cow on the other hand is depicted as smaller (approximately one-half the size of the bull), having no shoulder hump or raised rump and apparently lacking definite horns. The cow further is characterised by a narrower neck than the bull. The paired group of bovids have stylistic similarities to the bovid palaeolithic bas reliefs from the island of Levanzo and Fourneau du Diable in France (Mifsud & Mifsud, 1997). Definite Late Neolithic depictions include (1) a model cow clay figurine with small horns and left foreleg broken found at Ta' Hagrat Temples [Mg/P.1000]. The udders on the figurine are clearly modelled, as are also the fold of skin on the neck. It lacks a shoulder hump. It appears similar to the cow relief from Tarxien. Length 4.2 cm, height 2.3 cm (Zammit, 1929; Evans, 1971); and (2) a plate with a diameter of 25.2 cm found at Hal Saflieni Hypogeum [S/P.1] which on its interior has scratched decoration representing a number of quadrupeds including eight bulls and two goats. The bulls all show long horns, a shoulder hump and a raised rump. They are similar to the bull reliefs from Tarxien (Zammit, 1916; Evans, 1971). The various measurable profile depictions of the bovine representations attributed to the Late Neolithic suggest the measurement ratios outlined in Table 1. There did not appear to be any statistically significant difference between the measurement ratios of the Neolithic Bull and Cow depictions.A large number of cattle bone remains have been excavated from various Early and Late Neolithic sites in the Maltese Islands including Ghar Dalam, Borg in-Nadur, Skorba, Hagar Qim, Qortin l'Mdawwar, Tarxien, and Zebbug in Malta; and Ggantija, Pergla, and Xaghra in Gozo (Evans, 1971). The bone remains from a number of the sites have been accurately

studied and described. At Ghar Dalam, the Bos sp. remains obtained from the surface layers were noted to belong to a small species (Bate, 1925), while at Skorba a number of domesticated animal species were represented, including cattle. The cattle seemed to be more frequent in the earlier phases and were noted to be remarkable for their large size. These were subsequently assigned to the *Bos primigenius* type (Gandert, 1966; Evans, 1971). The cattle bones from the Xemxija Neolithic Tombs were noted to be much less common than those of the sheep/goat. These remains were described as certainly belonging to a breed which was smaller than the present day Mediterranean cattle (Pike, 1971). Cattle horn cores were also excavated from a number of Neolithic sites, particularly those found at Ggantija (Goso) and Tarxien Temples (Malta). The former find was described as a bovine horn core 30 cm long and 6.5 cm in diameter at its base. Two bull horn cores from Tarxien Temples were described as measuring 70 cm long and 30 cm in diameter at the base (Zammit, 1918; Evans, 1971).

The various depictions and skeletal remains suggest that the bull during Neolithic times was characterised by a large hump over the shoulder similar to that found in the

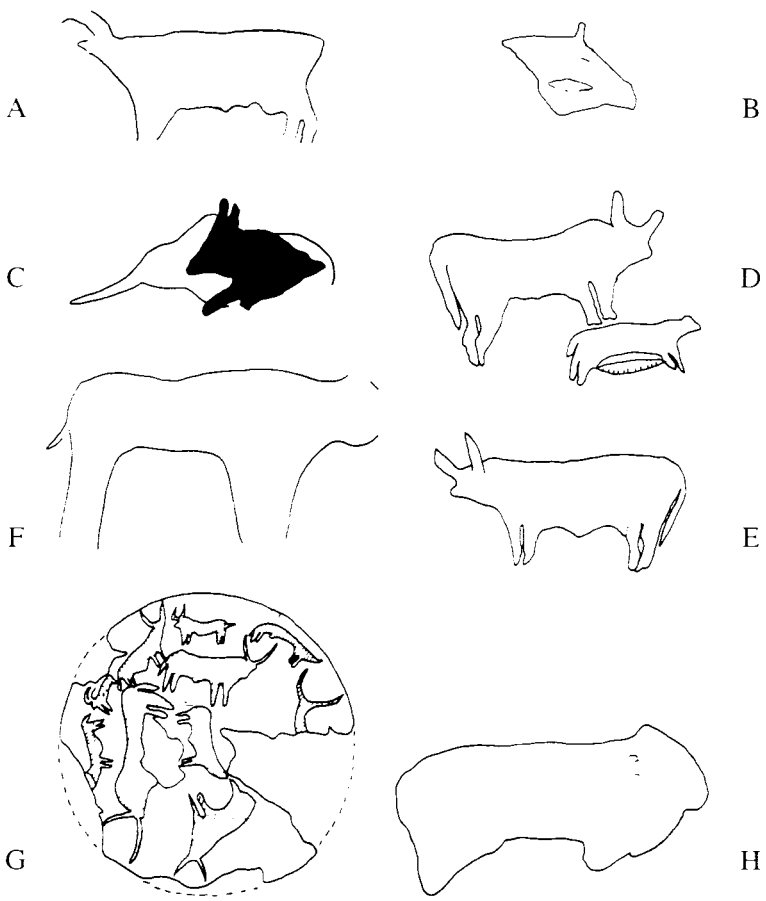

Fig. 55. Prehistoric bovids from the Maltese Island. A, B and C: bovids in red roche at Ghar Hasan. D and E: bovids in bas relief at Hal Tarxien temples. F: black bovid at Hypogeum. G: platter with painted bovids. H: clay cow at Ta'Hagrat.

various modern breeds of zebu (*Bos indicus*). In addition the Maltese Neolithic Bull breed appears to have been characterised by long bulky horns. Allowing that the length of the horn core is about 77% of the true length of the horn (Hall, 1962), then the horn length in the Maltese Neolithic Bull reached a total length of 91 cm. The horn was very bulky, its width being about one-third its length. The combination of long bulky horns, a shoulder hump and a possible pendulous dewlap approximates the Neolithic Maltese Breed to the Ankole-Watusi Cattle which originated in Africa. The Maltese Neolithic Cow on the other hand was apparently smaller with short horns and lacked a definite shoulder hump.

A modern breed of humped cattle was existent in Malta until the late 1980s. It is presently represented by only three cow examples, and an active programme is being conducted by the Maltese Cattle Foundation to restore the herds by artificial selective interbreeding. This local breed of cattle was described in 1915 as being "*very remarkable, though hardly known beyond the narrow limits of the islands. The breed consists of well-shaped animals of large size, generally having a reddish coat of short hairs, with undersides slightly lighter, a character so well fixed by constant in-breeding that, with the exception of a few specimens having a coat of reddish-yellow hair, other colours or mixture of colours are entirely absent. The horns curve outwards, forwards and upwards. The bull is a specially powerful animal, but being generally very unruly, is rarely put to agricultural work. The cow, which is fully of the same size as the bull, and as powerful, is usually of very gentle disposition, and is kept only for agricultural work, for which it is an ideal animal*" (Borg, 1915). A series of photographs of deceased specimens of Maltese Cattle confirm the large size, fawn colour and shoulder hump characteristic of the breed. The horns are however noted to be relatively short. The cows are similar except that the hump is not as pronounced. The various profile modern photograph depictions suggest the measurement ratios outlined in Table 1. The present Maltese breed cows weigh about 400 kg and measure 274 cm in length, 152 cm in height at the withers and 162 cm at the rump. Past photographs suggest that the deceased bulls stood at about 180 cm at the withers. The differences in the measurement ratios between the Neolithic and the Modern humped breeds of Maltese Bulls were

Measurement Ratio	**NEOLITHIC BULL (n=9)**		**MODERN HUMPED BULL (n=8)**		**statistical significance**
	Mean	*s.d.*	*Mean*	*s.d.*	
Shoulder height / Body length	0.50	0.09	0.64	0.08	p<0.001
Chest height / Body length	0.29	0.06	0.37	0.02	p<0.001
Head length / Body length	0.17	0.04	0.24	0.03	p<0.001
Measurement Ratio	**NEOLITHIC COW (n=2)**		**MODERN HUMPED COW (n=3)**		**statistical significance**
	Mean	*s.d.*	*Mean*	*s.d.*	
Shoulder height / Body length	0.46	0.06	0.62	0.08	p<0.05
Chest height / Body length	0.28	0.04	0.36	0.06	p>0.05 ns
Head length / Body length	0.21	0.07	0.27	0.06	p>0.1 ns

Fig. 56. Measurement ratios of Neolithic and Modern Maltese Cattle.

statistically significant in that the Neolithic breed appeared overall leaner and shorter than the Modern breed and carried large long curved horns. Only the shoulder height/body length ratio was significantly different in the Neolithic and Modern Cow breeds.

Cattle are believed to have originated in Asia from where the species spread to Eurasia and Africa during the Holstein Interglacial (1 mA). Modern cattle are broadly divided into two species: (1) *Bos taurus* which was domesticated in Europe about 8500 years ago from the wild aurochs, *Bos primigenius* and (2) *Bos indicus* which was domesticated in south-eastern Asia about the same time or a little later probably from the Banteng (*Bos javanicus*), the wild ox of Java and Borneo. Some authorities date the domestication of cattle as early as 10,000 years ago. Interbreeding of the Egyptian or Hamitic Longhorn (*Bos primigenius*) and Asian humped cattle (*Bos indicus*) in Eastern Africa about 4000 years ago, produced the Sanga (*Bos africanus*) which is the base stock of many of the indigenous African breeds including the long bulky-horned humped Ankole-Watusi. The concept and formulation of modern breeds of cattle began in the mid-regions of England, in northern Europe, and on the Channel Islands during the mid-1800s, and most modern breeds were formed in the latter half of that century (Cupps, 1994; Watusi Int. Reg., 1996). The Pleistocene aurochs were apparently of a massive build. The auroch stood six feet (1.83 m) high at the shoulders and weighed about a ton. It was long-legged and lightly built, though with a powerfully muscled neck. Their horns were huge, as much as one metre long. The cows were about three-quarters of the size of the bulls. Subsequent domestication of cattle by man resulted in a reduction in the size of the bovids so that by the Neolithic period, cattle generally stood at 115-138 cm at the withers thus resembling most modern breeds of cattle. The modern Maltese humped cattle breed is a larger form being about 152-180 cm high at the withers (Herre, 1970; Kurten, 1970; Attenborough, 1989, pp. 57-65).

It is generally supposed that Early Neolithic man colonised the Maltese Islands about 7000 years ago coming from Sicily and bringing domesticated animals, including cattle. This sea connection with the mainland was apparently maintained throughout the Late Neolithic period as evidence by graffiti depictions of ships at Tarxien temples. An alternative theory for the origins of the Maltese Neolithic cattle is that Neolithic man found a primitive form of cattle on the Islands which he subsequently domesticated. The excavation of oxen remains from undisturbed Pleistocene (c.18 kA) deposits at Ghar Dalam (Malta) in association with *cervus*, hippopotami and elephant remains in "red earth" deposits confirms that the species had migrated to the Maltese Islands during the Upper Pleistocene. A species which likewise is known to have migrated to the Maltese Islands during the Upper Pleistocene and persisted until the Neolithic period is the European Red Deer - *Cervus elaphus* Linn. This subsequently became extinct on the Islands as a result of overhunting and habitat destruction (Savona-Ventura, 1996). The Maltese Islands emerged from below sea-level during the Late Miocene probably during the Messinian crisis. Sea-level variability during the Pliocene and Pleistocene resulted in periods where the Islands were connected to the mainland. Palaeogeographical evidence has suggested that the Maltese Islands were connected with Sicily and Libya in the Late Miocene - Early Pliocene (c.5 mA); with Sicily and east Mediterranean lands during the Sicilian (c. 200 kA); with Sicily, Tunisia and Libya during the Mindel-Riss interglacial (c.180 kA); with Sicily, Tunisia, Libya and Sardinia in the Riss (c.150 kA); and with Sicily during the Würmian period (Upper Pleistocene-c.18 kA). The last connection with Sicily accounts for the present prevalence of a Sicilian-type fauna on

the Maltese Islands (Pasa, 1953; Corti & Lanza, 1973). The fossil record suggests that the Maltese bovid first crossed from Sicily during the Würmian period together with other pliestocene fauna, including the European Red Deer. It became subsequently isolated and survived until the Maltese Islands were colonized by man in the Early Neolithic (c.7000 bp). It was domesticated and with selective breeding there was subsequent alteration to the breed's genetics.

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Riassunto

L'arte preistorica maltese offre parecchi esempi raffiguranti tori e mucche. Le prime rappresentazioni appaiono dipinte nelle caverne e presentano una varietà di tori dalle lunghe corna. Questi dipinti hanno caratteristiche che evocano l'arte paleolitica. Le rappresentazioni di tori e mucche del Tardo Neolitico si riscontrano come bassorilievi o raffigurate sulle terracotte: suggeriscono una somiglianza tra la varietà di tori dalle lunghe corna e il bestiame Ankole-Watusi proveniente dall'Africa. Le dimensioni dei bovidi nelle rappresentazioni neolitiche sono state confrontate con quelle derivate da fotografie dell'odierna varietà del toro maltese dalle corna corte. Le misurazioni confermano una differenza significante, probabilmente il risultato di una successiva evoluzione della specie e licenza pittorica.

Summary

Maltese prehistoric art has several examples depicting bulls and cows. The earliest depictions appear as cave paintings and suggest a long-horned bull variety. These cave paintings have features suggestive of Palaeolithic art. Late Neolithic depictions of bulls and cows exist as bas-reliefs, pottery depictions, or models. These pictorial representations confirm the skeletal record and suggest the bull to have been a humped, long-horned variety showing close similarities to the modern day Ankole-Watusi Cattle which originated in Africa. Measurement ratios of the Neolithic bovid depictions were compared to similar measurement taken from photographs of the modern day Maltese humped, short-horned breed of bull. These measurements confirm a statistically significant difference, probably resulting from subsequent evolution of the species and pictorial licence.

Résumé

L'art préhistorique maltais offre plusieurs exemples représentant taureaux et vaches. Les premières représentations sont peintes dans les grottes et présentent une variété de taureaux aux longues cornes. Ces peintures ont des caractéristiques qui évoquent l'art paléolithique. Le représentations de taureaux et de vaches du Néolithique Tardif sont des bas-reliefs ou sont peintes sur la terre cuite: elles suggèrent une ressemblance entre la variété de taureaux aux longues cornes et le bétail Ankole-Watusi de l'Afrique. Les dimensions des bovidés dans les représentations néolithiques ont été comparées à celles dérivées de photographies de l'actuelle variété du taureau maltais aux courtes cornes. Les mesurages confirment une différence significative, probablement le résultat d'une évolution successive de l'espèce et licence picturale.